

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/073,314	02/13/2002	Kenji Hoshi	020171	4466	
23850	7590 03/05/2003				
ARMSTRONG,WESTERMAN & HATTORI, LLP			EXAMINER		
1725 K STREET, NW SUITE 1000			FARAHANI, DANA		
WASHINGTO	DN, DC 20006		ART UNIT	PAPER NUMBER	
			2814		
			DATE MAILED: 03/05/2003		

Please find below and/or attached an Office communication concerning this application or proceeding.

				A 4.			
	Application No	О.	icant(s)				
•	10/073,314		HOSHI ET AL.				
Office Action Summary	Examiner		Art Unit				
	Dana Farahan		2814				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status							
1) Responsive to communication(s) filed on <u>06</u> .	January 2003 .						
	nis action is non	-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. Disposition of Claims							
4) Claim(s) 1-8 is/are pending in the application.							
4a) Of the above claim(s) is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.							
6)⊠ Claim(s) <u>1-8</u> is/are rejected.							
7) Claim(s) is/are objected to.							
8) Claim(s) are subject to restriction and/c	or election requi	rement.					
Application Papers							
9) The specification is objected to by the Examine	er.						
10) The drawing(s) filed on is/are: a) □ acce	pted or b)☐ obje	cted to by the Exan	niner.				
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
11)☐ The proposed drawing correction filed on	_ is: a) _ appro	ved b) disapprov	ved by the Examiner.				
If approved, corrected drawings are required in reply to this Office action.							
12) The oath or declaration is objected to by the Examiner.							
Priority under 35 U.S.C. §§ 119 and 120							
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).							
a) All b) Some * c) None of:							
1. Certified copies of the priority documents have been received.							
2. Certified copies of the priority documents have been received in Application No							
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).							
a) The translation of the foreign language pro							
Attachment(s)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)	4) [5) [6) [(PTO-413) Paper No(s) Patent Application (PTO-152)				

Application/Control Number: 10/073,314

Art Unit: 2814

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-8 in Paper No. 6 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States
- 3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kepler et al., hereinafter Kepler (U.S. Patent 6,037,671).

In regard to claim 1, Kepler discloses in figure 3 alignment marks (the marks shown below number 23 in the figure) being divided by a micronized pattern.

In regard to claim 2, the pattern is a line and space pattern.

In regard to claim 3, a required length divides the lines shown in the pattern (see column 4, lines 41-45).

In regard to claim 4, positions of the divisions of the lines are offset from those of the divisions of their adjacent lines, as can be seen in the figure. Application/Control Number: 10/073,314

Art Unit: 2814

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kepler, as applied to claims 1-4 above and further in view of Hwang et al., hereinafter Hwang (U.S. Patent 6,162,675).

Kepler discloses the claimed invention, but does not expressly disclose a semiconductor device pattern is smaller than a margin of the alignment pattern. Kepler discloses at column 4, lines 41-45 that the dimensions of the marks are determined in a particular masking situation.

Hwang discloses in figure 15 a DRAM cell with a plurality of gates 206.

It would have been obvious to one of ordinary skill in the art at the time of the invention to make adjustments in alignment mark patterns in a particular masking situation to conform to the stepper used in the masking process.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (703)305-1914. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

Application/Control Number: 10/073,314

Art Unit: 2814

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M Fahmy can be reached on (703)308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Dana Farahani March 3, 2003

Page 4